

### In the Claims

Please amend claims 39, 49, 58 and 61; and add claims 63-72 as follows.

1. (Previously Presented) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end spaced along a longitudinal axis of the body, said first end having a first diameter and said second end having a second diameter wherein the second diameter is larger than the first diameter; and

- said implant body comprising first and second load bearing surfaces extending between the first and second ends of the implant body and being spaced apart by a central support member, the central support member having a width narrower than a width of the first and second load bearing surfaces, wherein the width of the first and second load bearing surfaces extends between the first and second ends of the implant body, wherein the central support member is coextensive with a midline of the implant body extending along the longitudinal axis, wherein said body is substantially "I" shaped in cross-section.

2-35 (canceled)

36. (Previously Presented) The implant of claim 1, wherein said first and second load bearing surfaces are non-continuous.

37. (Previously Presented) The implant of claim 1, wherein said body is tapered at least at said first end.

38. (Previously Presented) The implant of claim 1, wherein a distance between the first and second load bearing surfaces varies along the longitudinal axis.

39. **(Currently Amended)** The implant of claim 1, wherein the diameter of the second end is greater than a diameter of the implant at at least one other point along the longitudinal axis.

40. (Previously Presented) The implant of claim 1, wherein said first and second load bearing surfaces taper toward one another from said second end to said first end.

41. (Previously Presented) The implant of claim 40, wherein said body tapers at an angle of 8°.

42. (Previously Presented) The implant of claim 1, wherein said first and second load bearing surfaces include portions of a helical thread pattern.

43. (Previously Presented) The implant of claim 1, wherein said first and second load bearing surfaces include a pattern for anchoring to a vertebral body.

44. (Previously Presented) The implant of claim 1, wherein said central support member extends from said first end to said second end of said implant.

45. (Previously Presented) The implant of claim 44, wherein said central support member includes at least one opening therethrough.

46. (Previously Presented) The implant of claim 1, wherein said central support member comprises a plurality of columns.

47. (Previously Presented) The implant of claim 1, wherein said central support member passes through a single plane between diametrically opposed regions of said first and second load bearing surfaces.

48. (canceled)

49. **(Currently Amended)** An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end, said body having first and second load bearing surfaces extending along a longitudinal axis of the body from the first end to the second end, the first and second load bearing surfaces having a width extending perpendicular to the longitudinal axis, said first and second load bearing surfaces having a midline extending along the longitudinal axis, said first and second load bearing surfaces being spaced apart by a first height at the first end and a second height at the second end, wherein the first height is less than the second height; and

- said implant body comprising a plurality of columns connecting the first and second load bearing surfaces along their midlines, the columns having a width narrower than the width of the first and second load bearing surfaces, wherein the columns of the plurality of columns are aligned one behind another ~~along~~ at the longitudinal axis.

50. **(Previously Presented)** The implant of claim 40, wherein the implant body has a continuous taper from the second end to the first end.

51-52 (canceled)

53. **(Previously Presented)** The implant of claim 1, wherein said first and second load bearing surfaces form open channels on each side of the central support member, extending from the first end of the implant body to the second end of the implant body.

54. **(Previously Presented)** The implant of claim 49, wherein, said first and second load bearing surfaces include portions of a helical thread pattern.

55. **(Previously Presented)** The implant of claim 54, wherein said first and second load bearing surfaces are threaded from the first end of the body to the second end of the body.

56. (Previously Presented) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end spaced along a longitudinal axis of the body, said first end having a first diameter and said second end having a second diameter wherein the second diameter is larger than the first diameter; and
- said implant body comprising first and second load bearing surfaces extending between the first and second ends of the implant body and being spaced apart by a central support member, wherein the first and second load bearing surfaces taper toward one another from said second end to said first end;
- said central support member having a width narrower than a width of the first and second load bearing surfaces, wherein the width of the first and second load bearing surfaces extends between the first and second ends of the implant body;
- said central support member being coextensive with a midline of the implant body extending along the longitudinal axis, wherein said body is substantially "I" shaped in cross-section, wherein said first and second load bearing surfaces form open channels on each side of the central support member, extending from the first end of the implant body to the second end of the implant body.

57. (Previously Presented) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end, said body having first and second load bearing surfaces extending along a longitudinal axis of the body from the first end to the second end, the first and second load bearing surfaces having a width extending perpendicular to the longitudinal axis, said first and second load bearing surfaces having a midline extending along the longitudinal axis, said first and second load bearing surfaces being spaced apart by a first height at the first end and a second height at the second end, wherein the first height is less than the second height, wherein said first and second load bearing surfaces taper toward one another from said second end to said first end, said first and second load bearing surfaces including portions of a helical thread pattern;

- said implant body comprising a central support member connecting the first and second load bearing surfaces along their midlines, the central support member having a width narrower than the width of the first and second load bearing surfaces; and
- said first and second load bearing surfaces having opposing inner surfaces forming open channels on each side of the central support member, extending from the first end of the implant body to the second end of the implant body.

58. **(Currently Amended)** An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end, said body having first and second load bearing surfaces extending along a longitudinal axis of the body from the first end to the second end, the first and second load bearing surfaces having a width extending perpendicular to the longitudinal axis, said first and second load bearing surfaces having a midline extending along the longitudinal axis; and
- said implant body comprising a plurality of columns connecting the first and second load bearing surfaces along their midlines, the columns having a width narrower than the width of the first and second load bearing surfaces, wherein the columns of the plurality of columns are aligned one behind another along at the longitudinal axis.

59. **(Previously Presented)** The implant of claim 58, wherein said first and second load bearing surfaces have at least two openings.

60. **(Previously Presented)** The implant of claim 58, wherein said first and second load bearing surfaces have opposing inner surfaces forming open channels on each side of the columns.

61. **(Currently Amended)** An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end, said body having first and second load bearing surfaces extending along a longitudinal axis of the body

from the first end to the second end, the first and second load bearing surfaces having a width extending perpendicular to the longitudinal axis, said first and second load bearing surfaces having a midline ~~extending along~~ aligned with the longitudinal axis, said first and second load bearing surfaces having opposing inner surfaces; and

- said implant body comprising a central support member connecting the first and second load bearing surfaces ~~along~~ at their midlines, the central support member having a width narrower than the width of the first and second load bearing surfaces; wherein the opposing inner surfaces of the first and second load bearing surfaces form channels on either side of the central support member;

- wherein the central support member is configured to support loads placed upon the first and second load bearing surfaces.

62. (Previously Presented) The implant of claim 61, said channels extending along either side of the central support member from the first end of the body to the second end of the body.

63. (New) An implant for intervertebral fusion between opposing vertebrae, the implant comprising:

- an implant body having a first end and a second end spaced along a longitudinal axis, the body including:

- a central support member positioned in alignment with the longitudinal axis of the implant body, the central support member having a first support end and a second support end, the central support member having a longitudinal dimension extending from the first support end to the second support end; and

- a first traverse member positioned at the first support end of the central support member, the first traverse member being oriented in a direction traverse to the longitudinal dimension of the central support member;

- a second traverse member positioned at the second support end of the central support member, the second traverse member being

oriented in a direction traverse to the longitudinal dimension of the central support member;

- wherein each of the first and second traverse member extends from the first end of the implant body to the second end of the implant body; and
- wherein the central support member is configured to maintain a spatial relation between the first and second traverse members.

64. (New) The implant of claim 63, wherein each of the first and second traverse members has free ends, the central support member being positioned between the free ends of the first and second traverse members.

65. (New) The implant of claim 64, wherein the central support member has a first side and a second side, the first side and the corresponding free ends of each of the first and second traverse members defining a first channel, the second side and the corresponding free ends of each of the first and second traverse members defining a second channel.

66. (New) The implant of claim 65, wherein the first and second channels extend from the first end of the implant body to the second end.

67. (New) The implant of claim 63, wherein the central support member extends from the first end of the implant body to the second end.

68. (New) An implant for intervertebral fusion between opposing vertebrae, the implant comprising:

- an implant body having a first end and a second end, the implant body including:
  - a first traverse member having opposite first free ends;
  - a second traverse member having opposite second free ends;

- a central support member that bisects each of the first and second traverse members;
- wherein the first and second traverse members extend from the first end to the second end of the implant.

69. (New) The implant of claim 63, wherein the central support member maintains a spatial relation between the first and second traverse members.

70. (New) The implant of claim 63, wherein the central support member has a first side and a second side, the first side and the corresponding free ends of each of the first and second transverse members defining a first channel, the second side and the corresponding free ends of each of the first and second transverse members defining a second channel.

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71. (New) The implant of claim 66, wherein the first and second channels extend from the first end of the implant body to the second end.

72. (New) An implant for intervertebral fusion between opposing vertebrae, the implant comprising:

- an implant body having length, the length extending from a first end to a second end, the implant body including first and second traverse members and a support member that bisect each of the first and second traverse members;
- a first channel centrally located between the first and second traverse members, the first channel extending along the length of the implant body;
- a second channel centrally located between the first and second traverse member, the second channel extending along the length of the implant body;
- wherein the first and second channels are defined by continuous surfaces of each of the first and second traverse members, the continuous surfaces of the first and second traverse members extending along the length of the implant body; and



Fig 1  
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- wherein the support member is configured to provide rigid support of the first and second traverse member.